

**Notice of Allowability**

Application No.

09/740,923

Examiner

Mark A. Mais

Applicant(s)

BREWER ET AL.

Art Unit

2664

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 29 March 2005.
2. ☒ The allowed claim(s) is/are 1-53.
3. ☒ The drawings filed on 19 December 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 06 December 2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**DETAILED ACTION*****Allowable Subject Matter***

1. Claims 1-53 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The Examiner has not found a router containing an egress queuing structure with parallel queues wherein the parallel queues are interconnected with each other and to a common shared memory device and a queue congestion processor interconnected with the input terminals of all of the parallel queues and an output selection block interconnected with all the output terminals of all the parallel queues further interconnected to an egress arbitration processor.

The closest art of record, Sriram (USP 5,463,620), performs similar, yet distinctly different, functions. Sriram has parallel queues, allocates bandwidth to the parallel queues [by QOS/COS], multiplexes the output, but fails (1) to perform congestion control on the inputs of the parallel queues, (2) to dynamically reallocate unused bandwidth, and (3) to interconnect the parallel queues with each other on a common shared memory device.

Aatresh (USP 6,067,301), can dynamically reallocate unused bandwidth but fails to (1) to perform congestion control on the inputs of the parallel queues, and (2) to affirmatively interconnect the parallel queues with each other on a common shared memory device. Wu (USP 6,477,167) also dynamically reallocates unused bandwidth, but also fails to (1) to perform congestion control on the inputs of the parallel queues, and (2) to affirmatively interconnect the parallel queues with each other on a common shared memory device. Moreover, Jeong (6,671,597), performs input traffic management, and output traffic processing, but fails to interconnect the input traffic management processing to all the parallel queues as well as fails to interconnect all the parallel queues with each other on a common shared memory device [Fig. 8].

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3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Smith (USP 6,349,097), Multicasting in switching apparatus.

(b) Zheng et al. (USP 6,611,522) Quality of Service facility in a device performing IP forwarding and ATM switching.

(c) Zavalkovsky et al. (USP 6,822,940), Method and Apparatus for adapting enforcement of network quality of service policies based on feedback about network condition.


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is (571) 272-3138. The examiner can normally be reached on 6:00-4:30.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

23 May 2005



**WELLINGTON CHIN**  
**EXAMINER IN CHIEF**